What is claimed is:

1. An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a viscosity at the liquid phase temperature equal to or higher than 0.4 Pa·s.

2. An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a glass transition temperature equal to or less than 540°C.

3. An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a transmittance λ 80 is equal to or less than 500nm and a transmittance λ 5 is equal to or less than 385nm.

4. The optical glass of claim 1 wherein said optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3; 0-25 percent of Nb_2O_5; 0-40 percent of WO_3; 4-45 percent of at least one R'_2O selected from among Li_2O, Na_2O, and K_2O; and 0-30 percent (excluding 30 percent) of at least one RO selected from among BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

5. The optical glass of claim 2 wherein said optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3; 0-25 percent of Nb_2O_5; 0-40 percent of WO_3; 4-45 percent of at least one R'_2O selected from among Li_2O, Na_2O, and K_2O; and 0-30 percent (excluding 30 percent) of at least one RO selected from among BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

6. The optical glass of claim 3 wherein said optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3; 0-25 percent of Nb_2O_5; 0-40 percent of WO_3; 4-45 percent of at least one R'_2O selected from among Li_2O, Na_2O, and K_2O; and 0-30 percent (excluding 30 percent) of at least one RO selected from among BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

7. The optical glass of claim 1 wherein said optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3 (where the total quantity of

P_2O_5 and B_2O_3 is 15-35 percent); 0-45 percent of WO_3; 0-25 percent of Nb_2O_5; 0 to 10 percent of TiO_2 (where the total quantity of WO_3, Nb_2O_5, and TiO_2 is 20-45 percent); 0-25 percent of BaO; 0-20 percent of ZnO (where the total quantity of BaO and ZnO is less than 30 percent); 2-30 percent of Li_2O; 2-30 percent of Na_2O; 0-15 percent of K_2O (where the total quantity of Li_2O, Na_2O, and K_2O is 10-45 percent); 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al_2O_3; 0-5 percent of Y_2O_3; 0-1 percent of Sb_2O_3; and 0-1 percent of As_2O_3; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

8. The optical glass of claim 2 wherein said optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent); 0-45 percent of WO_3; 0-25 percent of Nb_2O_5; 0 to 10 percent of TiO_2 (where the total quantity of WO_3, Nb_2O_5, and TiO_2 is 20-45 percent); 0-25 percent of BaO; 0-20 percent of ZnO (where the total quantity of BaO and ZnO is less than 30 percent); 2-30 percent of Li_2O; 2-30 percent of Na_2O; 0-15 percent of K_2O (where the total quantity of Li_2O, Na_2O, and K_2O is 10-45 percent); 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al_2O_3; 0-5 percent of Y_2O_3; 0-1 percent of Sb_2O_3; and 0-1 percent of As_2O_3; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

9. The optical glass of claim 3 wherein said optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent); 0-45 percent of WO_3; 0-25 percent of Nb_2O_5; 0 to 10 percent of TiO_2 (where the total quantity of WO_3, Nb_2O_5, and TiO_2 is 20-45 percent); 0-25 percent of BaO; 0-20 percent of ZnO (where the total quantity of BaO and ZnO is less than 30 percent); 2-30 percent of Li_2O; 2-30 percent of Na_2O; 0-15 percent of K_2O (where the total quantity of Li_2O, Na_2O, and K_2O is 10-45 percent); 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al_2O_3; 0-5 percent of Y_2O_3; 0-1 percent of Sb_2O_3; and 0-1 percent of As_2O_3; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

10. An optical glass comprising, as molar percentages, 15-30 mol percent of P_2O_5; 0.5-15 mol percent of B_2O_3; 5-25 mol percent of Nb_2O_5; 6-40 mol percent of WO_3; 4-45

mol percent of at least one R'_2O selected from among Li_2O, Na_2O, and K_2O; and 0-30 percent (excluding 30 percent) of at least one RO selected from among BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 95 percent.

11. An optical glass comprising 15-30 percent of P_2O_5; 0.5-15 percent of B_2O_3; 5-25 percent of Nb_2O_5; 6-40 percent of WO_3; 4-45 percent of at least one R'_2O selected from among Li_2O, Na_2O, and K_2O; and 0-30 percent (excluding 30 percent) of at least one RO selected from among BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 95 percent.

12. The optical glass of claim 11 wherein said optical glass comprising 0-25 molar percent (excluding 0 molar percent) of BaO.

13. An optical glass comprising 15-30 percent of P_2O_5; 0.5-15 percent of B_2O_3; 5-25 percent of Nb_2O_5; 6-40 percent of WO_3; not more than 10 percent of TiO_2; 4-45 percent of at least one R'_2O selected from among Li_2O, Na_2O, and K_2O; and 0-30 percent (excluding 30 percent) of at least one RO selected from among BaO, ZnO, and SrO.

14. An optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent); 0-45 percent of WO_3; 0-25 percent of Nb_2O_5; 0 to 10 percent of TiO_2 (where the total quantity of WO_3, Nb_2O_5, and TiO_2 is 20-45 percent); 0-25 percent of BaO; 0-20 percent of ZnO (where the total quantity of BaO and ZnO is less than 30 percent); 2-30 percent of Li_2O; 2-30 percent of Na_2O; 0-15 percent of K_2O (where the total quantity of Li_2O, Na_2O, and K_2O is 10-45 percent); 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al_2O_3; 0-5 percent of Y_2O_3; 0-1 percent of Sb_2O_3; and 0-1 percent of As_2O_3; where the total quantity of all of the above-listed components is equal to or more than 94 percent; a density of oxygen atoms contained is in the range of from 4.2×10^{22} to $5.2 \times 10^{22}/cm^3$.

15. An optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent); 2-45 percent of WO_3; 0-25 percent of Nb_2O_5; 0 to 10 percent of TiO_2 (where the total quantity of WO_3, Nb_2O_5, and TiO_2 is 20-45 percent); 0-25 percent of BaO; 0-20 percent of ZnO (where the total quantity of BaO and ZnO is less than 30 percent); 2-30 percent of Li_2O;

2-30 percent of Na_2O; 0-15 percent of K_2O (where the total quantity of Li_2O, Na_2O, and K_2O is 29-45 percent); 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al_2O_3; 0-5 percent of Y_2O_3; 0-1 percent of Sb_2O_3; and 0-1 percent of As_2O_3; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

16. An optical glass comprising, as molar percentages, 12-34 percent of P_2O_5; 0.2-15 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent); 2-45 percent of WO_3; 0-25 percent of Nb_2O_5; 0 to 10 percent of TiO_2 (where the total quantity of WO_3, Nb_2O_5, and TiO_2 is 20-45 percent); 0-11 percent of BaO; 0-20 percent of ZnO (where the total quantity of BaO and ZnO is less than 30 percent); 2-30 percent of Li_2O; 2-30 percent of Na_2O; 0-15 percent of K_2O (where the total quantity of Li_2O, Na_2O, and K_2O is 10-45 percent); 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al_2O_3; 0-5 percent of Y_2O_3; 0-1 percent of Sb_2O_3; and 0-1 percent of As_2O_3; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

17. The optical glass of claim 14 wherein said optical glass has the composition comprising, as essential components, P_2O_5, B_2O_3, WO_3, Nb_2O_5, TiO_2, BaO, ZnO, Li_2O, Na_2O and K_2O or the composition comprising the above essential components and Sb_2O_3.

18. The optical glass of claim 15 wherein said optical glass has the composition comprising, as essential components, P_2O_5, B_2O_3, WO_3, Nb_2O_5, TiO_2, BaO, ZnO, Li_2O, Na_2O and K_2O or the composition comprising the above essential components and Sb_2O_3.

19. The optical glass of claim 16 wherein said optical glass has the composition comprising, as essential components, P_2O_5, B_2O_3, WO_3, Nb_2O_5, TiO_2, BaO, ZnO, Li_2O, Na_2O and K_2O or the composition comprising the above essential components and Sb_2O_3.

20. The optical glass of claims 14 or 15 wherein said optical glass comprises 0-11 percent of BaO.

21. The optical glass of claims 14 or 16 wherein said total quantity of Li_2O, Na_2O, and K_2O is equal to or more than 29 percent.

22. The optical glass of claim 14 wherein said optical glass has a density of oxygen atoms contained in the range of from 4.2×10^{22} to $5.2 \times 10^{22}/cm^3$.

23. The optical glass of claim 15 wherein said optical glass has a density of oxygen atoms contained in the range of from 4.2×10^{22} to $5.2 \times 10^{22}/cm^3$.

22. The optical glass of claim 16 wherein said optical glass has a density of oxygen atoms contained in the range of from 4.2 x 10^{22} to 5.2 x $10^{22}/cm^3$.

23. An optical glass comprising P_2O_5, B_2O_3, WO_3 and an alkali metal oxide, wherein the total quantity of P_2O_5 and B_2O_3 is 15-35 molar percent and a content of WO_3 is 2-45 molar percent and a density of oxygen atoms contained ranges from 4.2 x 10^{22} to 5.2 x $10^{22}/cm$.

24. The optical glass of claim 23 wherein said optical glass comprises 2-30 molar percent of Li_2O.

25. The optical glass of claim 14 wherein said optical glass does not comprise substantial amount of GeO_2.

26. The optical glass of claim 15 wherein said optical glass does not comprise substantial amount of GeO_2.

27. The optical glass of claim 16 wherein said optical glass does not comprise substantial amount of GeO_2.

28. The optical glass of claim 23 wherein said optical glass does not comprise substantial amount of GeO_2.

29. The optical glass of claim 14 wherein said optical glass exhibits a glass transition temperature equal to and/or less than 530°C and a yield point temperature equal to or less than 580°C.

29. The optical glass of claim 15 wherein said optical glass exhibits a glass transition temperature equal to and/or less than 530°C and a yield point temperature equal to or less than 580°C.

29. The optical glass of claim 16 wherein said optical glass exhibits a glass transition temperature equal to and/or less than 530°C and a yield point temperature equal to or less than 580°C.

29. The optical glass of claim 23 wherein said optical glass exhibits a glass transition temperature equal to and/or less than 530°C and a yield point temperature equal to or less than 580°C.

30. The optical glass of claim 14 wherein said optical glass exhibits a refractive index in the range of from 1.7 to 2.0, an Abbé number in the range of from 20 to 32.

31. The optical glass of claim 15 wherein said optical glass exhibits a refractive index in the range of from 1.7 to 2.0, an Abbé number in the range of from 20 to 32.

32. The optical glass of claim 16 wherein said optical glass exhibits a refractive index in the range of from 1.7 to 2.0, an Abbé number in the range of from 20 to 32.

33. The optical glass of claim 23 wherein said optical glass exhibits a refractive index in the range of from 1.7 to 2.0, an Abbé number in the range of from 20 to 32.

34. The optical glass of claim 14 wherein said optical glass exhibits a liquid phase temperature equal to or less than 970°C.

34. The optical glass of claim 15 wherein said optical glass exhibits a liquid phase temperature equal to or less than 970°C.

35. The optical glass of claim 16 wherein said optical glass exhibits a liquid phase temperature equal to or less than 970°C.

36. The optical glass of claim 23 wherein said optical glass exhibits a liquid phase temperature equal to or less than 970°C.

37. An optical part being composed of the optical glass of claim 1.

38. An optical part being composed of the optical glass of claim 2.

39. An optical part being composed of the optical glass of claim 3.

40. An optical part being composed of the optical glass of claim 10.

41. An optical part being composed of the optical glass of claim 11.

42. An optical part being composed of the optical glass of claim 13.

43. An optical part being composed of the optical glass of claim 14.

44. An optical part being composed of the optical glass of claim 15.

45. An optical part being composed of the optical glass of claim 16.

46. An optical part being composed of the optical glass of claim 23.

47. A glass preform being composed of the optical glass of claim 1.

48. A glass preform being composed of the optical glass of claim 2.

49. A glass preform being composed of the optical glass of claim 3.

50. A glass preform being composed of the optical glass of claim 10.

51. A glass preform being composed of the optical glass of claim 11.

52. A glass preform being composed of the optical glass of claim 13.

53. A glass preform being composed of the optical glass of claim 14.

54. A glass preform being composed of the optical glass of claim 15.

55. A glass preform being composed of the optical glass of claim 16.

55. A glass preform being composed of the optical glass of claim 23.

56. A method of manufacturing glass preforms wherein a prescribed amount of a piece of molten glass flowing out of a flowout pipe is received in a receiving mold to prepare a glass preform made of the optical glass of claim 1.

57. A method of manufacturing glass preforms made of the optical glass of claim 1, comprising the steps of :

a molten glass glob is made to fall by causing molten glass flowing out of a flowout pipe to drip naturally or by cutting with a cutting blade;

the molten glass glob is received in a depression in a forming mold, and in the process, air, a nonreactive gas or some other gas is blown out through minute holes in the depressions; and,

a layer of air is generated between the molten glass glob and the inner surface of depression in the forming mold and the molten glass glob is maintained and cooled within the depression in a state of essential non-contact with the inner surface of the depression until at least a portion of the outer surface of the molten glass glob reaches a temperature not greater than the melting temperature.

58. A method of manufacturing glass products comprising the steps of :

heating the glass preform of claim 56 or the glass preform prepared by the method of claim 57; and

precisely press molding the heated glass preform to obtain a glass product.